

User's Guide

KeyGrabber Module

USB 4 MB / 2 GB
PS/2 4 MB / 2 GB



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Table of contents

Introduction	3
About the product	3
Features	3
Requirements	3
Applications	4
Hardware installation	5
Disclaimer	5
Overview	6
Checklist	7
Preparing the keyboard	8
Preparing the connectors	10
Assembly	12
Recording keystrokes	13
Viewing recorded data	14
Specifications	16
Troubleshooting	17
List of special keys	19
Legal disclaimer	20

Introduction

About the product

The *KeyGrabber Module* is a special version of the *KeyGrabber USB* and *KeyGrabber PS/2*, embeddable inside a keyboard. Low profile board and universal 0.1" connectors guarantee compatibility with every PS/2 and USB keyboard available. Once mounted inside the keyboard, this keystroke recorder is completely invisible for the eye and for software. The device is 100% transparent for computer operation and no software or drivers are required for keystroke logging.

Features

- Low profile board, universal 0.1" connectors
- Transparent to computer operation, undetectable for security scanners
- Up to 2 GB memory capacity, organized as a flash file system
- Compatible with all USB and PS/2 keyboards (including Linux & Mac)
- Transparent to computer operation, undetectable for security scanners
- Memory protected with strong 128-bit encryption
- Plug & Play install, no drivers required
- Most features of the *KeyGrabber USB* or *KeyGrabber PS/2*

Requirements

- Compatible keyboard:
 - USB version: USB HID-compliant keyboard (Low-Speed, Full-Speed, or High-Speed)
 - PS/2 version: PS/2 compliant keyboard
- USB version: computer with USB Mass-Storage device support

Applications

Employers:

- Monitor acceptable internet usage
- Monitor employee productivity
- Detect unauthorized access attempts
- Backup typed text
- Collect computer usage statistics

Parents:

- Monitor your family's computer activity
- Protect your child from on-line hazards and predators
- Observe WWW, E-mail, and chat usage
- Save a copy of written documents

Investigators:

- Monitor remote computers
- Retrieve unknown passwords, operating system independent
- Collect computer-related evidence
- Detect unauthorized use of computer equipment

Hardware installation

Embedding the *KeyGrabber Module* inside a PS/2 or USB keyboard is a one-time process and has to be done by the user. Data typed on this keyboard will be logged by the module whenever the keyboard is powered. The same keyboard must be used to retrieve recorded data afterwards. It is the user's responsibility for connecting the *KeyGrabber Module* correctly, following the detailed guide below.

Disclaimer

The manufacturer and/or seller of the *KeyGrabber Module* will take no responsibility for the following events:

- **damage to the *KeyGrabber Module*, keyboard, or computer caused by incorrect installation or misuse**
- **loss of warranty for the keyboard or computer**
- **any other damage or harm caused by not following the installation instructions**
- **failure of user installation**

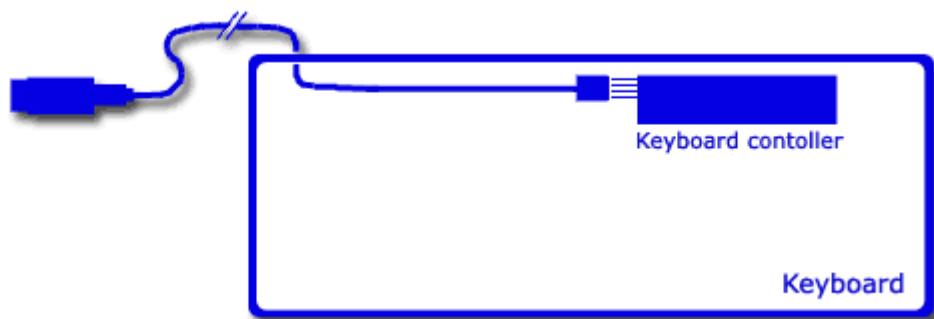
Please note that the instructions and images below are provided only as an example. The internal keyboard component and cable layout may vary for different keyboard manufacturers.

KeyGrabber Module

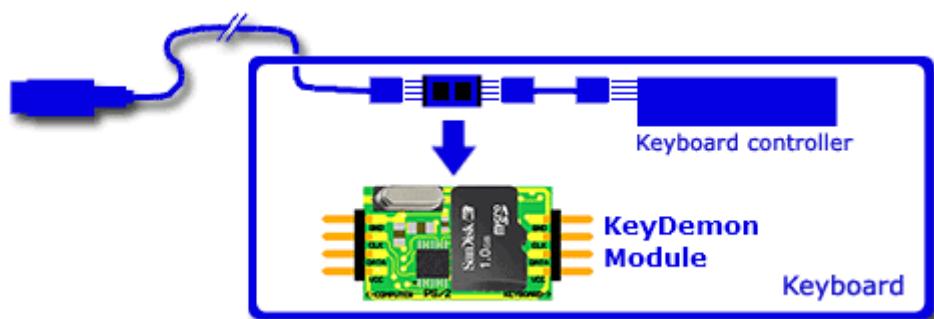
Overview

The *KeyGrabber Module* has to be located between the keyboard controller (inside the keyboard) and the keyboard PS/2 or USB cable. This requires cutting the four main USB signal lines (VCC, GND, D+, D-) or PS/2 signal lines (VCC, GND, CLK, DATA) and connecting them to the *KeyGrabber Module* from both sides.

Before installation



After installation



Checklist

Before starting, make sure you have everything that's necessary to successfully mount the *KeyGrabber Module* inside the keyboard. First of all, **disconnect the keyboard from the computer**, undo the screws, and open the keyboard housing. Make sure there is enough space inside the keyboard for the *KeyGrabber Module*.

Then, make sure you have all the parts and tools necessary to perform the installation process:

- *KeyGrabber Module* circuit miniboard
- Two 4-pin 0.1" connectors (supplied with the module)
- Short-circuit tester or ohmmeter (present in most multimeters)
- Pliers or crimp tool
- Glue or resin



Preparing the keyboard

A standard USB or PS/2 keyboard is connected with the computer using 2 power lines, and 2 signal lines. The *KeyGrabber Module* should connect to these lines both on the PS side, and on the keyboard side. In some cases two additional unused lines and shielding are present (leave these unconnected).

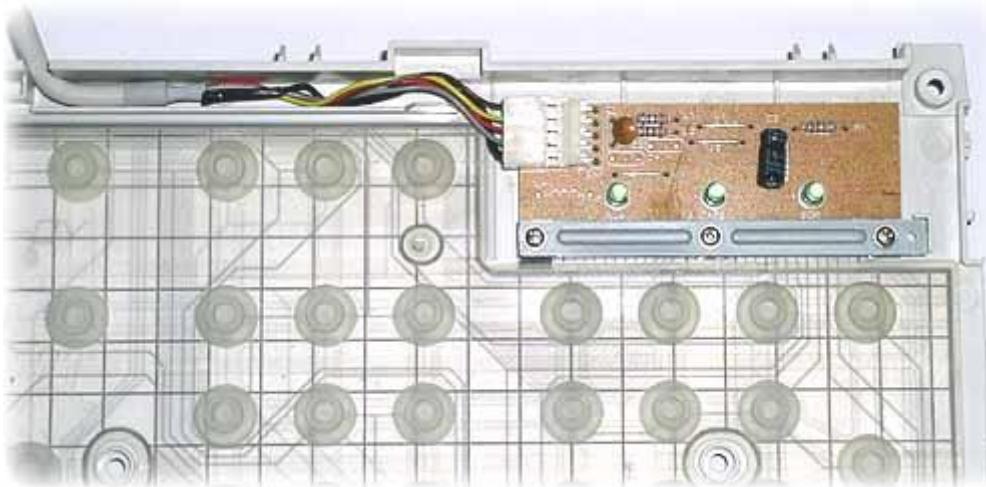
USB keyboard

Signal	Description	USB pin	Comments
VCC	+5V power	1	
D-	Data	2	
D+	Data	3	must be connected to module
GND	Power ground	4	
SHLD	Shield	-	not used by module if present, leave in original state

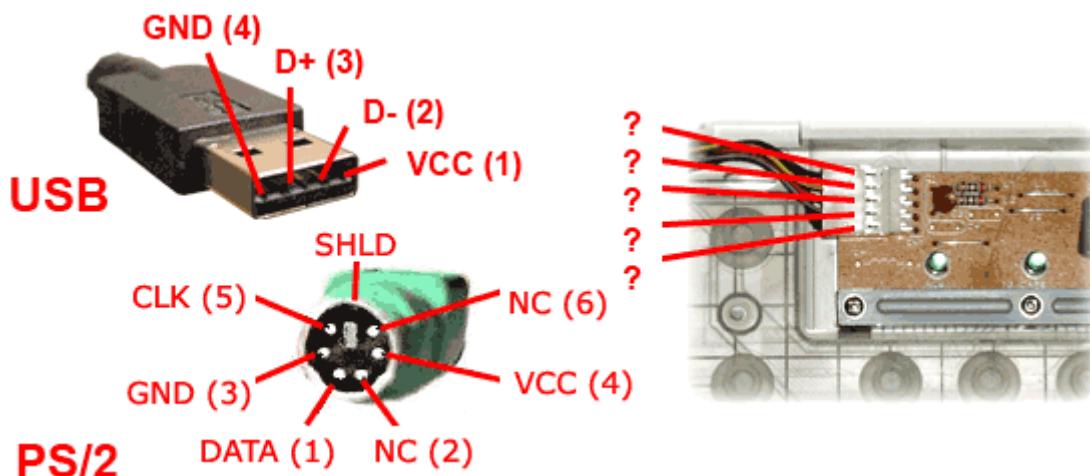
PS/2 keyboard

Signal	Description	PS/2 pin	Comments
VCC	+5V power	4	
GND	Power ground	3	
CLK	Clock	5	must be connected to module
DATA	Data	1	
NC	Unused lines	2, 6	not used by module if present, leave in original state
SHLD	Shield	-	

Disconnect the keyboard from the computer, undo the screws, and open the keyboard housing. You should see the keyboard cable connected to the keyboard controller.



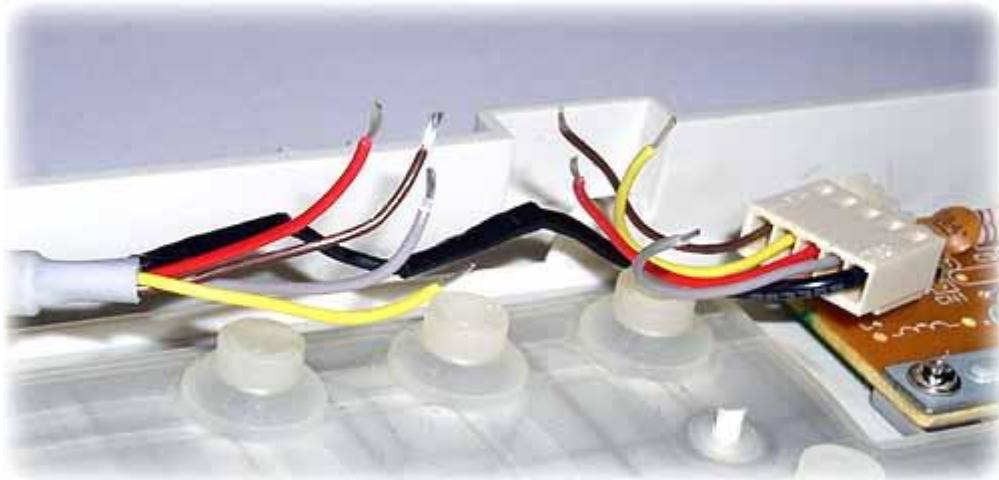
Identify the connector at the keyboard controller first. Use the short-circuit tester to determine which wires are connected to the pins at the keyboard USB or PS/2 plug. An example is shown on the picture below. Note, that only the pins at the USB or PS/2 connector are determined. The pins inside the keyboard are unknown, and must be examined with the short-circuit tester.



Note down the cable configuration, identifying the wires by their colors. Only the four main signal lines are significant. The NC lines and shielding may be ignored.

Preparing the connectors

Find a spot for mounting the *KeyGrabber Module* inside the keyboard. Then, cut the four main signal wires in a way which will allow connecting to the module from both sides. It may be necessary to peel the cable coating, as shown on the image below. If the shielding and NC lines are present, there is no need to cut them.

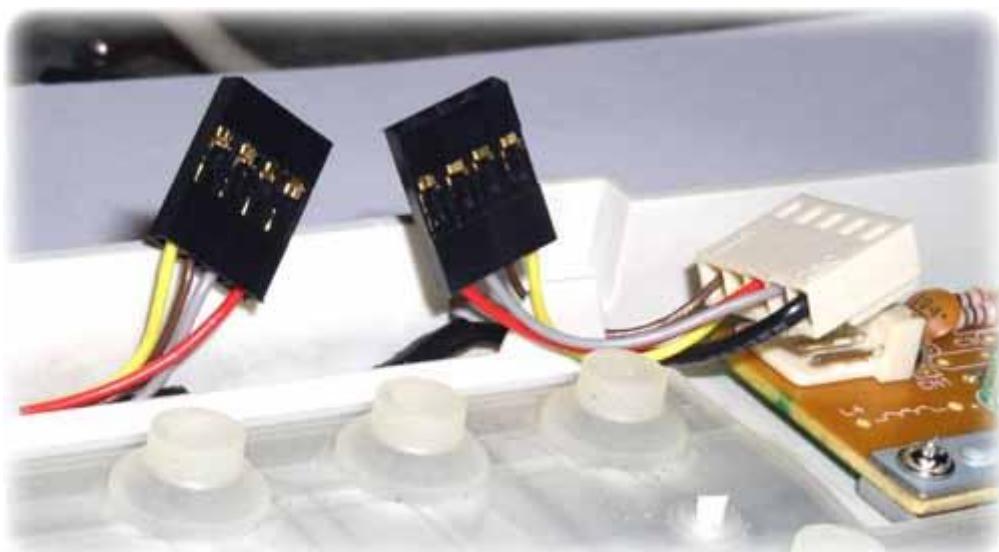
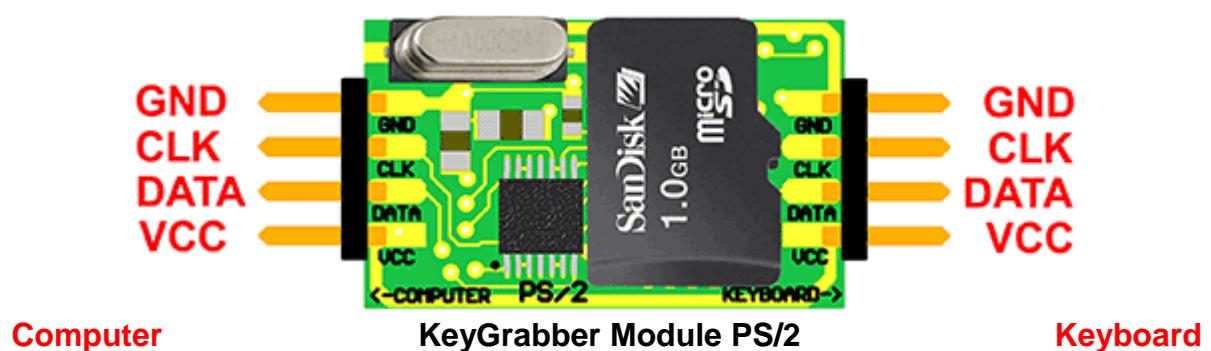
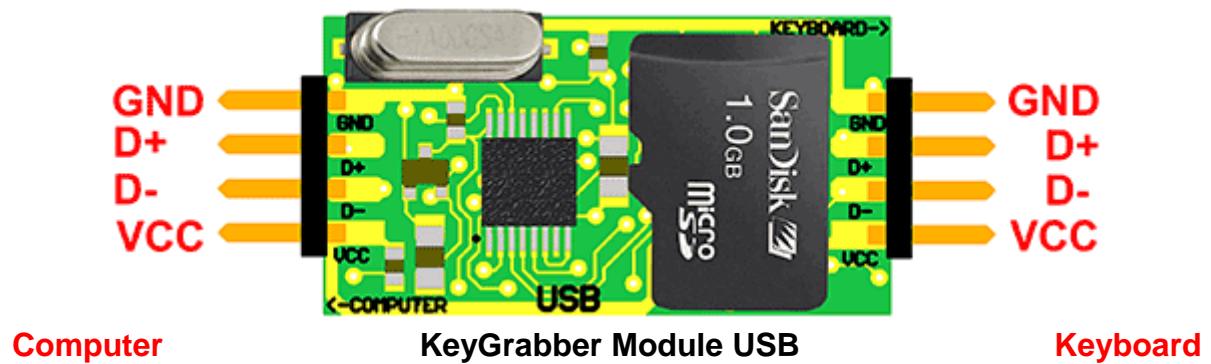


Prepare the wire tips. Crimp the provided connector sockets over the wire tips with the pliers or crimp tool.



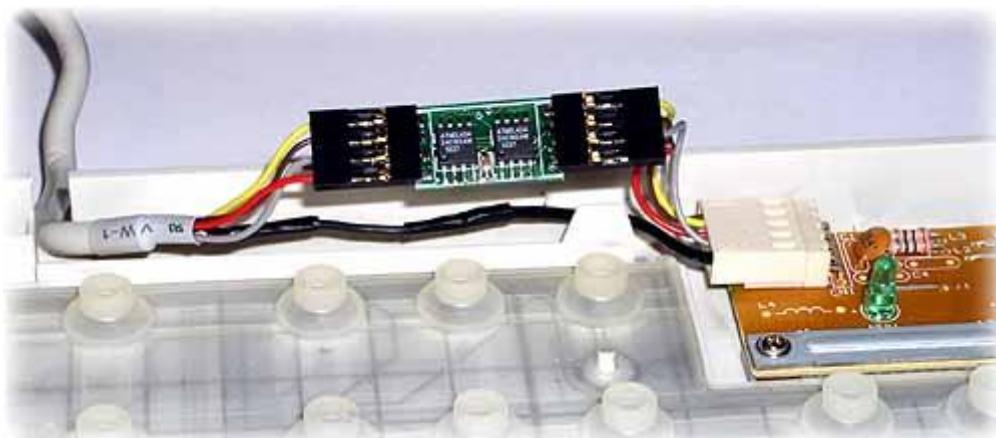
Finally, assemble the black 0.1" connectors, inserting the sockets into the casing. **The connector pinout must match the module pinout on both sides**, as shown on the picture below.

KeyGrabber Module

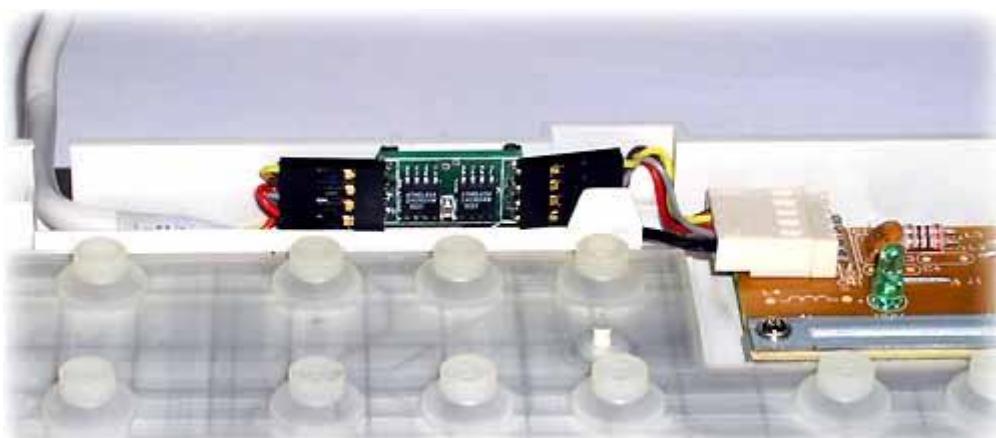


Assembly

Before proceeding, double-check that the module pins match the USB or PS/2 connector pins and the keyboard controller pins. Use the short-circuit tester to ensure, that the connectors weren't confused in the installation process (the *KeyGrabber Module* is flipped or upside-down). **If the pins are connected incorrectly, the keyboard, KeyGrabber Module, and PC might get damaged!** If certain both connectors are assembled correctly, connect the module. Remember to connect the PC side to the USB or PS/2 cable, and the keyboard side to the keyboard controller. If uncertain, refer to the previous pictures.



Finally, locate the *KeyGrabber Module* in its place. It is a good idea to glue the module and cables to the keyboard housing. Once the module and cables are mounted, reassemble the keyboard. A good idea is the check the GND and VCC pins on the keyboard connector after the keyboard is assembled. **If the multimeter indicates a short circuit, all connections must be rechecked!**



Recording keystrokes

Recording mode is the default mode of operation for the *KeyGrabber Module*. In record mode, the device will silently monitor all keystrokes coming from the keyboard and store them to the internal flash drive.

To start recording, just plug the keyboard with the embedded *KeyGrabber Module* into the USB or PS/2 keyboard socket. Recording will start automatically on power-up.



Viewing recorded data

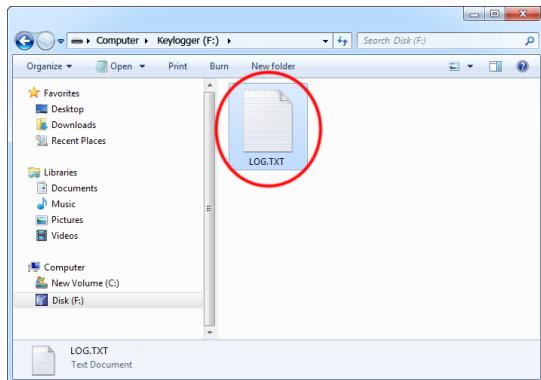
Once data has been recorded, it may be viewed by accessing the *KeyGrabber Module* inside the keyboard. The procedure differs for the USB and PS/2 versions. Follow the instructions below.

USB version

Connect the keyboard with the embedded *KeyGrabber Module* to a USB port, and press the 3-key combination **simultaneously** (by default K, B, S).



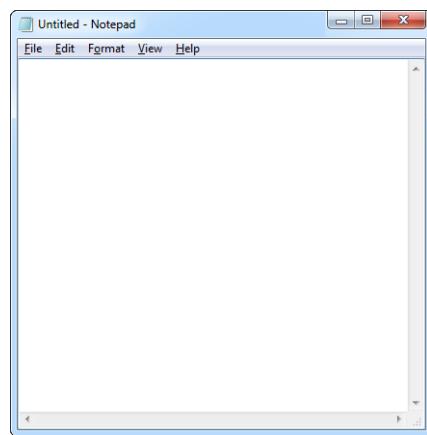
The device will pop up as a removable drive, containing the file LOG.TXT.



LOG.TXT will contain all recorded keystroke data. Use any text editor (such as *Notepad*) to view the recorded data.

PS/2 version

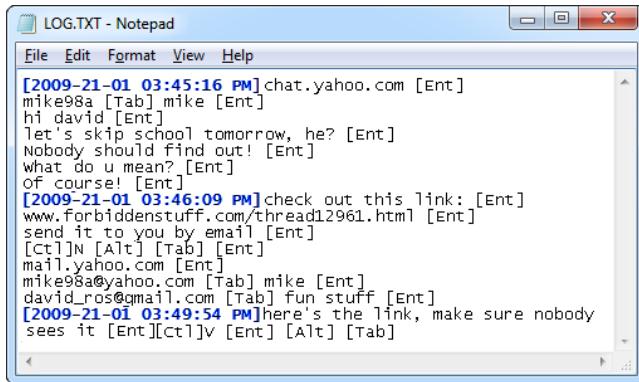
Connect the keyboard with the embedded *KeyGrabber Module* to the PS/2 keyboard port, and open a text editor, such as *Notepad*.



Press the 3-key combination **simultaneously** (by default K, B, D)



A text menu will pop up, showing available options. Use the text menu to browse recorded keystroke data. Use the digit keys to browse around the menu.



To finish viewing recorded data, safely remove the flash disk. For *MS Windows*, left-click on the *Safe Removal* icon in the system tray and select the appropriate drive.



While using the text menu, do not change the active application. To exit, chose the exit option in the menu.

For additional information, refer to the *KeyGrabber USB User's Guide* and the *KeyGrabber PS/2 User's Guide*.

Specifications

	KeyGrabber Module USB	KeyGrabber Module PS/2
Power supply	4.5 V – 5.5 V DC	4.5 V – 5.5 V DC
Max. power consumption	65 mA (0.33 W)	65 mA (0.33 W)
Maximum burst log speed (approx.)	500 byte/s	500 byte/s
Maximum continuous log speed (approx.)	100 byte/s	100 byte/s
Memory capacity	4 MB / 2 GB	4 MB / 2 GB
Data retention	100 years	100 years
Keyboard support	USB HID-compatible keyboard (Low-speed, Full-speed, High-speed)	PS/2-compatible keyboard
Dimensions excluding edge connectors (L x W x H)	33 mm x 17 mm x 10 mm (1.3" x 0.7" x 0.4")	28 mm x 17 mm x 10 mm (1.1" x 0.7" x 0.4")

All KeyGrabber products come with 1 year warranty against manufacturer defects. Defect products must be shipped by the customer. All warranty repairs and delivery to the customer will be paid by the manufacturer.

Troubleshooting

The *KeyGrabber Module* will **not** work with the following hardware configurations:

1. Internal laptop keyboards
2. Wireless keyboards
3. Bluetooth keyboards
4. USB-PS/2 and PS/2-USB adapters
5. Non-conformant USB or PS/2 keyboards

The keyboard is not responding

The module has not been installed correctly. Please revise the hardware installation process (section **Hardware installation**).

The module does not switch to Flash Drive mode (USB version)

Please check the following:

1. Have you installed the module correctly? Please revise the hardware installation process (section **Hardware installation**).
2. Is your 3-key combination correct?
3. Are you pressing the 3 keys simultaneously? The 3-key combination will not be accepted if pressed sequentially.

The keyboard doesn't work in Flash Drive mode (USB version)

This is normal behavior. In Flash Drive mode, the keylogger will install the removable disk instead of the keyboard. Use the mouse to copy the log file to the hard drive, then restore normal operation. Alternatively, you may use a second keyboard while in Flash Drive mode.

The mouse and keyboard don't work in Flash Drive mode (USB version)

This can happen on keyboard/mouse combos. In Flash Drive mode, the keylogger will install the removable disk instead of the keyboard/mouse combo. To get around this, connect the mouse to a different USB socket while in Flash Drive mode. Alternatively, you may use a second keyboard or mouse.

The module does not display the text menu (PS/2 version)

Please check the following:

1. Have you installed the module correctly? Please revise the hardware installation process (section **Hardware installation**).
2. Have you opened a text editor, such as *Notepad*?
3. Is your 3-key combination correct?
4. Are you pressing the 3 keys simultaneously? The 3-key combination will not be accepted if pressed sequentially.

Problems with detecting the PS/2 keyboard during system startup (PS/2 version)

Some systems try to enumerate the keylogger as a USB device before initializing the keyboard. In certain cases on such systems, the keylogger may attempt to switch to Flash Drive mode, disabling the PS/2 keyboard. A simple solution to this problem is to disable USB mode through the configurations options in the text menu.

I've checked everything, nothing helps!

If you are still experiencing problems, please do the following:

1. Check if the problem appears on a different keyboard.
2. Check if the problem appears on a different computer.
3. Contact the dealer you have purchased the device from. Please supply all necessary information (keyboard model and manufacturer, OS type and version, and a short description of the problem).

List of special keys

[Esc]	-	Escape	[Prn]	-	Print Screen
[F1]	-	F1	[End]	-	End
[F2]	-	F2	[Scr]	-	Scroll Lock
[F3]	-	F3	[Up]	-	Up
[F4]	-	F4	[Dwn]	-	Down
[F5]	-	F5	[Lft]	-	Left
[F6]	-	F6	[Rgh]	-	Right
[F7]	-	F7	[Num]	-	Num Lock
[F8]	-	F8	[‐N]	-	- (num)
[F9]	-	F9	[+N]	-	+ (num)
[F10]	-	F10	[.N]	-	. / Delete (num)
[F11]	-	F11	[/N]	-	/ (num)
[F12]	-	F12	[*N]	-	* (num)
[Ctl]	-	Control	[0N]	-	0 / Insert (num)
[Alt]	-	Alt	[1N]	-	1 / End (num)
[Ins]	-	Insert	[2N]	-	2 / Down (num)
[Hom]	-	Home	[3N]	-	3 / Page Down (num)
[PUp]	-	Page Up	[4N]	-	4 / Left (num)
[PDn]	-	Page Down	[5N]	-	5 (num)
[Del]	-	Delete	[6N]	-	6 / Right (num)
[Win]	-	Win	[7N]	-	7 / Home (num)
[Aps]	-	Apps	[8N]	-	8 / Up (num)
[Cap]	-	Caps Lock	[9N]	-	9 / Page Up (num)
[Ent]	-	Enter	[Pwr]	-	Power
[Bck]	-	Backspace	[Slp]	-	Sleep
[Tab]	-	Tab	[Wke]	-	wake

Legal disclaimer

KeyGrabber does not take responsibility for any damage, harm or legal actions caused by misuse of its products. The user should follow the guidelines contained in this document, otherwise no liability will be assumed. It is the user's responsibility to obey all effective laws in his/her country, which may prohibit usage of KeyGrabber products. Please also consider, that not knowing the law does not allow to not obeying it. A good example is the U.S. Department of Justice Letter on Keystroke Monitoring and Login Banners, according to which a clear notice should be displayed, warning that user keystrokes may be logged. Please check with your legal representative for logging requirements in your country.

**For more information on KeyGrabber products,
visit our website:**

<http://www.keelog.com/>

You should not use this device to intercept data you are not authorized to possess, especially passwords, banking data, confidential correspondence etc. Most countries recognize this as a crime. Please consult a legal representative for logging requirements in your country.

KeyGrabber Module

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